STATE OF COLORADO

John W. Hickenlooper, Governor
Christopher E. Urbina, MD, MPH
Executive Director and Chief Medical Officer

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-2000
Located in Glendale, Colorado

Laboratory Services Division
8100 Lowry Blvd.
Denver, Colorado 80230-6928
(303) 692-3090

http://www.cdphe.state.co.us

Colorado Department
of Public Health
and Environment

December 12, 2012

Barbara Biggs, Governmental Affairs Officer
Metro Wastewater Reclamation District
6450 York Street
Denver, CO 80229-7499

Re: ADDENDUM to PEL No. 200322, Metro Wastewater Reclamation District's proposed Northern Treatment Plant-Updated for Construction Dewatering/Remediation

Dear Ms. Biggs:

The Water Quality Control Division (Division) of the Colorado Department of Public Health and Environment previously reviewed the Preliminary Effluent Limits (PELs) on 9/9/2011 in *Determination of Preliminary Effluent Limits for a Metro District Northern Treatment Plant to be Located on Upper South Platte Segment 15, Near Weld County Road 2* (Report 290) for the Metro Wastewater Reclamation District (MWRD) proposed Northern Treatment Plant (NTP). Report 290 was developed for the MWRD by William Lewis and James McCutchan. In order to facilitate implementation of a permit for temporary groundwater dewatering at the NTP site, the Division will be utilizing Report 290 to also develop effluent limits for the temporary on-site construction dewatering for the NTP.

At this time, the facility is scheduled to start construction activities at the site in the beginning of 2013, and is in need of a construction dewatering/remediation permit. The starting point for the limitations in the dewatering permit will be the PEL that was developed for the domestic WWTF discharge. These limitations are based on a design flow from that facility, which is significantly greater than the design flow for the dewatering activity, and therefore these limitations are very conservative. The 9/9/11 PELs for the NTP were developed using the future facility's full design capacity of 28.8 MGD. The proposed design flow for the construction dewatering permit will be 4.0 MGD (6.2 cfs)

For some parameters, the full available dilution based on the dewatering design flow, are needed as the groundwater on the site contains concentrations greater than those allowable in the PEL. Therefore, the Division, is recalculating the WQBELs for a few parameters, based on the design flow to be used for the dewatering activity. Added to this PEL addendum are total recoverable iron, cyanide, total recoverable aluminum, benzene and BTEX, because these parameters are potential parameters of concern with groundwater dewatering at the new NTP construction site, for which dilution either was not calculated in the PEL, or for which the additional dilution may be needed for the dewatering discharge.

For all other parameters, the limitations provided in the PEL200322 will be used It should be noted that the stream low flows for these calcualtions were 154 and 110 cfs for 30-day average and acute low flows, respectively. Calcualtions utilizing these flows are shown below.

Ambient instream data for benzene and BTEX were taken from Suncor South Platte sampling location 08, located about 1.5 miles upstreamof the future NTP site, and were used collected between 1/2/2012 to 4/9/2012. The total recoverable iron data were received from the facility consultant (William Lewis and James McCutchan) who prepared the PEL. Data represented 3-years of total recoverable iron monitoring at South Platte Station at 160th. Total aluminum data was from Riverwatch Station 172 (at Platteville) and was based on one sample taken on 7/1/2000.

Chronic Limitations for those parameters investigated

Parameter	***Q_1 (cfs)***	***Q_2 (cfs)***	***Q_3 (cfs)***	***M_1***	***M_3***	***M_2***
Al, TR (µg/l)	154	6.2	160.2	849	1,437	***16,042***
Fe, TR (µg/l)	154	6.2	160.2	550	1,000	***121,77***
Benzene (µg/l)	154	6.2	160.2	0.54	2.3	***46***

Acute Limitations for those parameters investigated

Parameter	***Q_1 (cfs)***	***Q_2 (cfs)***	***Q_3 (cfs)***	***M_1***	***M_3***	***M_2***
Al, TR (µg/l)	110	6.2	116.2	849	10,071	***188,750***
CN, Free (µg/l)	110	6.2	116.2	0	5	***94***
BTEX** (µg/l)	110	6.2	116.2	1***	100	***100****

**To replace Benzene, Toluene, Ethylbenzene and Xylene

***Assumed, even though analysis data showed parameters making up the BTEX all are below delection level at 1

**** Set to standard since it is technology based standard

The levels in Table 1 are the ones that would be needed to fully protect water quality. The technology based PELs in Table 1 are based on effluent limits for pollutants of concern as established in the *Regulations for Effluent Limitations* (Regulation No. 62), or at lower levels necessary to protect downstream water quality standards.

Table 1 **Proposed Northern Treatment Plant Dewatering Permit Limitations** **Preliminary Effluent Limits for Discharge to the South Platte River**	
PARAMETER	***Technology Based Effluent Limit***

PARAMETER	*WQBEL from Report 290 or Modified Limit*
Aluminum, TR (µg/l)	173687 (daily maximum), 16,042 (30-day average)
Cyanide, Free (µg/l)	94 (daily maximum)
Iron, TR (µg/l)	121,77 (30-day average)
Benzene (µg/l)	46 (30-day average)
BTEX (µg/l)	1,856 (daily maximum)

If you have any questions regarding these PELs, please contact me at (303) 692-3597.

Sincerely,

Kenan Diker
Permit Writer
Permits Section

cc: Bret Icenogle, WQCD - ES
PEL file No. 200322